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ABSTRACT

Within Canada, the examination of stratification and mobility has traditionally been related to both class and ethnicity. Previous research has not examined the theory that educational institutions may be, in part, perpetuating the vertical mosaic, because teachers assume that children from certain ethnic groups can learn more and faster than children from other ethnic groups. This document reports on research dealing mainly with the relationships among ethnicity, teachers' expectations, and the differences in educational performances of French-speaking and Yiddish-speaking students, when the effects of ability, aspirations, and a number of other theoretically relevant variables have been taken into consideration. A causal model incorporating both normative and cognitive expectations of teachers was used, with data limited to students in grades 9 and 10. Results show that teachers appear to base their expectations upon intellectual ability and past performance of students rather than upon ethnicity, sex, and socioeconomic status. Moreover, the data indicate that expectations affect the teachers' assigned grades to a greater degree than they affect student achievement on standardized examinations, in which ethnicity does relate to the results. Three pages of notes, three pages of references, two figures, and three tables are appended. (Author/IW)

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ETHNICITY, TEACHERS' EXPECTATIONS,' AND STUDENTS' PERFORMANCES IN ONTARIO SCHOOLS*

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Abstract

This research examines the extent to which differences in achievement between Yiddish-speaking and French-speaking students are accounted for by the expectations of their teachers. A causal model incorporating both normative and cognitive expectations of teachers is used. The results suggest that teachers base their expectations on the intellectual ability and previous performance of students rather than upon their ethnicity. Moreover, the data indicate that expectations affect the teachers' assigned grades to a greater degree than they affect achievement on standardized examinations.

ETHNICITY, TEACHERS' EXPECTATIONS, AND STUDENTS' PERFORMANCES IN ONTARIO SCHOOLS

Within Canada, the examination of stratification and mobility has traditionally been related to both class and ethnicity. In fact, John Porter (1965) argued that ethnicity was a major cause of class structures. As such, it has been argued by Porter and others that there are two ways ethnicity either hinders or facilitates upward mobility. The most common theme has been that ethnic subcultures shape the development of abilities and aspirations in order to preserve culture-specific values and attitudes. That is, children socialized within ethnic subcultures develop abilities and aspirations which predetermine educational achievement and, in turn, which ultimately match certain occupational status positions within society (Blishen, 1970, p120: Breton & Rosenborough, 1968, p4).

The second most common theme has been that the channels for upward mobility have been blocked to certain ethnic groups. That is, certain ethnic groups have not been able to move up the socioeconomic status system because members of more established groups have discriminated against them (Darroch, 1979, p3; Li, 1978). In this respect, a number of American scholars (Bowles & Gintis, 1976; Carnoy, 1974; Dusek & Joseph, 1983; Rist, 1970) have argued that schools play a major role in perpetuating the existing social stratification system, in part because teachers assume that children from certain ethnic groups and middle social class positions can learn more and faster than children from other ethnic groups and lower social class positions.[1]

The second theme has not been examined explicitly to determine its relative importance in comparison with the first theme. Nevertheless, empirical evidence gathered in the 1950s (Porter, 1965, p90) indicated overrepresentation of British, Jewish, German, and other northern European groups in the upper levels of the occupational structure in Canadian society

and underrepresentation of French, Italian, and Native Indian and Inuit groups. More recent research on ethnic immigrants in Toronto (Li, 1978), has illustrated that Jewish and British adults have very high educational and occupational achievement and that occupational achievement was largely the result of educational achievement. Similarly, previous research on the data used in the present study (King, 1968) showed that Yiddish-speaking students had much higher performances and a much higher retention rate than Dutch-, English-, Hungarian-, and Polish-speaking students, while the performances and the retention rate for French-speaking students were substantially lower than all other groups. The differences between the ethnic groups were maintained even when size of community, father's and mother's education, father's occupation, and number of children in the family were controlled.

The previous research suggests that, even though ethnicity has been an important factor in the analyses of the occupational stratification system in Canada, it has not generally been included in the analysis of the way in which education fits into the occupational stratification system (Breton, Burnet, Hartmann, Isajiw & Lennards, 1975, p83; Darroch, 1979, p17). In this respect, Darroch (1979, p13) has stated that his reanalyses of Porter's data

> reinforce the ... conclusion that the question of the salience of ethnicity for stratification requires a good deal more specification than is implied by the broad notion of a country in which ethnic pluralism is a primary aspect of class and status structures.

The present study attempts to provide more specification by examining both of the themes as they relate to ethnic stratification within the educational system. It is hypothesized that ethnicity has both direct and indirect effects upon educational performances. Ethnicity may be related to ability, aspirations, previous performances, and the educational system may simply sort students on these criteria. Moreover, teachers may hold differential expectations based upon ethnicity and these expectations may affect the performances of students. Specifically, the main concern of this research is with the relationships between ethnicity, teachers' expectations,

and educational performances when the effects of ability, aspirations, and a number of other theoretically relevant variables have been taken into consideration.

A Model of Teachers' Expectations

Previous research on teachers' expectations has been largely concerned with bivariate relationships rather than multivariate relationships (Dusek & Joseph, 1983, p342). That is, researchers have often examined the effects of certain ascribed statuses, such as ethnicity or socioeconomic status, on the expectations of teachers but they have often neglected to control for important achieved statuses, such as the ability, aspirations, and previous performances of the students which may covary with the ascribed statuses (see Clifton, 1981a; 1981b; Clifton, Perry, Parsonson & Hryniuk, 1986). Thus, it is important to develop and test a more comprehensive model of teachers' expectations which separates the effects of ascribed statuses from the effects of achieved statuses (Brophy, 1983, p637). In this research, teachers' expectations which are based upon ethnicity, sex, and socioeconomic status are distinguished from teachers' expectations which are based upon intellectual ability, assigned grades, and academic aspirations.

In an extensive review of 345 studies, Rosenthal and Rubin (1978) suggested that the expectations that experimenters have for the behaviour of their subjects and the expectations that teachers have for the performance of their students are communicated both through verbal and nonverbal means. In most cases, when researchers or teqchers expect certain levels of performances from their subjects or students they communicate these expectations in such a way that neither the researchers, teachers, subjects, nor students know exactly how the information is transferred (Rosenthal, 1976). Moreover, the subjects and students often do not know how nor why they internalize the expectations in such a way that their behaviour is affected.

A number of researchers (Brophy, 1983; Brophy & Good, 1970; Rosenthal, 1976) have postulated theoretical linkages which may help explain how expectations operate within classrooms. First, it is postulated that a climate is established within classrooms so that differential expectations for performances are established and accepted by both the students and the teachers. Second, the teachers develop expectations about the students which are based upon both the ascribed and the achieved statuses of the students. Third, these expectations influence the teachers' behaviour towards the students. Fourth, the students interpret the behaviour of the teachers. Fifth, in response to differential treatment, each student tends to exhibit behaviour which complements and reinforces the teachers' expectations. Sixth, each teacher interprets each student's responses which reconfirms the original expectations. Seventh, each student interprets his or her own responses to the teachers' action which further reconfirms the original expectations. Finally, over a period of time, the achievement levels of the students and the social organization of the classrooms reflect, to some degree, differences in the expectations of the teachers.

Within classrooms, it is possible to distinguish between two interrelated dimensions of the educational enterprise. There is an instructional dimension that pertains to knowledge and skills and there is a social control dimension that pertains to the management of social interaction (see Bidwell, 1972; Parsons, 1959). Report cards, which are issued to students and their parents, and cumulative records, which are consulted by teachers and other professionals in the schools, convey teachers' assessments of students on both instruction and social control. Since both dimensions are seen as being important, it is logical to assume that teachers take each of them into consideration in developing expectations for their students.

From this perspective, two types of expectations may be identified: normative expectations and cognitive expectations (Clifton, 1981a; 1981b; Williams, 1976). Normative expectations concern the manner in which students

are seen, by their teachers, as meeting the behavioral standards of the classroom whereas cognitive expectations concern the manner in which students are seen as meeting the academic standards of the classroom. These two different types of expectations have been identified in the teachers' expectancy literature (Brophy, 1983; Dusek & Joseph, 1983; Rubin & Balow, 1979), but apparently only Clifton (1981a, 1981b) and Williams (1976) have integrated the two types of expectations into research on the manner in which teachers mediate the relationships between the ethnicity, socioeconomic status, and intellectual abilities of students, on the one hand, and their academic performances, on the other.

In this study only the most significant empirical linkages which may help explain how teachers' expectations operate within classrooms are examined. Specifically, we examine whether teachers develop differential expectations, about their students, which are based upon both ascribed and achieved statuses, and we examine the effects that teachers' expectations have upon academic performances. These linkages are illustrated in Figure 1. It is noted that one indicator of cognitive expectations and three indicators of normative expectations (exceptions for co-operation, industry, and reliability) are assumed to be caused by ethnicity, sex, socioeconomic status, intellectual ability, assigned grades, and academic aspirations, all of which were measured when the students were in Grade 9. In turn, all of these variables are assumed to be causes of three types of academic performances, assigned grades, standardized achievement in English, and standardized achievement in mathematics, all of which were measured when the students were in Grade 10.

Figure 1

Previous research has shown that teachers' expectations have effects upon standardized achievement tests (Braun, 1976; Brophy & Good, 1974; Cooper,

1979; Dusek, 1975). However, even though previous research has focused on standardized achievement tests, it is hypothesized that teachers' expectations, particularly cognitive expectations and expectations for industry, will have stronger effects on teacher assigned grades because teachers may either consciously or unconsciously bias their grading of tests which they themselves have constructed. Both teacher assigned grades and standardized achievement tests are included as dependent variables.

West and Anderson (1976) have argued that the literature supports the notion that students achievement causes expectations, and expectations, in turn, cause achievement. In the present study, teacher assigned grades are included at two points in time: Spring 1960 and Spring 1961. As a result, it is hypothesized that grades assigned in the Spring of 1960 affect both normative and cognitive expectations in the Autumn of 1960 and that all of these, in turn, affect both assigned grades and standardized achievement in the Spring of 1961.[2]

It is also probable that the academic aspirations of students play a major role in mediating any relationships between ethnicity, socioeconomic status, and both teachers' expectations and students' achievement (Feldman & Theiss 1982; Williams, 1972). As a result, this variable which was measured when the students were completing Grade 9, is incorporated into the model.

There is substantial evidence that both ethnicity and socioeconomic status affect the expectations of teachers (Dusek & Joseph, 1983; Feldman & Orchowsky, 1979; Marwit, Marwit & Walker, 1978). The model presented here hypothesizes that these two variables, as well as intellectual ability, measured when the students began Grade 9, not only affect normative and cognitive expectations, but they also affect all of the other variables. That is, it is hypothesized that socioeconomic status, intellectual ability, and ethnicity have both direct and indirect effects upon the achievement of students. Part of the indirect effects are via assigned grades in Grade 9 and

academic aspirations and part of the indirect effects are via normative and cognitive expectations.

There is also substantial evidence that the sex of the pupils affect various aspects of the academic achievement process (Richer, 1979). Moreover, within the teacher expectancy literature there is specific evidence of differential influence attributed to the sex of pupils (Clifton, 1981a; 1981b; Clifton, Perry, Parsonson and Hryniuk, 1986; Kehle, 1974).

In sum, the main concern of this research is with the relationships between ethnicity, teachers' expectations, and academic performances when the effects of ability, academic aspirations, and a number of other theoretically relevant variables have been taken into consideration. More specifically, the mediating effects that teachers' expectations have between ethnicity and academic performance are the main focus of attention.

Methodology

Data

Data were obtained from the Carnegie Human Resources Data Bank, a five year panel study of practically the total population of students (90,719) who were enrolled in the first year of high school, Grade 9, in the Province of Ontario at the beginning of the 1959-1960 academic year. Students were classified on their responses to the question, 'What is the main language spoken in your home?' On this basis, 79% of the students indicated that they were from English-speaking homes, 5% indicated that they were from French-speaking homes, 0.25% indicated that they were from Yiddish-speaking homes, and almost 16% indicated that they were from homes in which other languages were spoken.

From this data set, only French-speaking and Yiddish-speaking students were selected for analyses. There are three reasons for selecting the students from these two ethnic groups. First, the past research showed that the Yiddish-speaking students had higher performances and a higher retention

rate than students who spoke other northern European languages, while the French-speaking students had much lower performances and a much lower retention rate than students from other ethnic groups. This fits the notion that, in Ontario, the French-speaking citizens represent a 'white siege culture' (Breton, et al., 1975, p88) which does not apply to Yiddish-speaking citizens. Second, even though it may seem logical to compare minority students (French, for example) with majority (English) students, the English-speaking students were not selected because comparisons with Canadian census data revealed that this group represented a variety of ethnic and linguistic origins. That is, a number of students from other ethnic groups spoke English as their main language at home and, as a result, were classified as English-speaking. Third, the French speaking and Yiddish-speaking students were two relatively large and identifiable ethnic groups represented in the data set.

In total, 4733 students spoke French and 224 students spoke Yiddish as their main language. Of these, 2440 French-speaking students (52%) and 172 Yiddish-speaking students (77%) completed Grade 10 in the Spring of 1961.[3] In the analyses, pairwise deletion of missing data was used.

Variables

Complete descriptions of the questionnaires and tests that were administered to the students can be found in Brehaut (1964) and D'Oyley (1964). The following thirteen variables are used in the present study:

Ethnicity (x_1). This variable was created from the respondents answers to a question about the major language that was spoken in their homes. Students who spoke French were coded as 1 and students who spoke Yiddish were coded as 2.

Sex (x_2). To create this variable, one of two possible responses, coded as 1 for males and 2 for females, was obtained from each respondent.

Socioeconomic Status (x_3). To create this variable three student-reported measures were summed: father's occupation, an eight category

scale based on Blishen and McRoberts (1976), father's education, and mother's education, five point scales ranging from 'No secondary school' to 'University degree'.

Intellectual Ability (x_4). The students' scores on the Canadian Academic Aptitude Test III (non-verbal reasoning) were taken as the indicator of intellectual ability. This test had a range of scores from 0 to 43.

Assigned Grades (x_5, x_{11}). In both Grade 9 and Grade 10, average grades were calculated from the marks, for all relevant subjects, which were assigned by the teachers. Assigned grades were obtained from the school records, and ranged from 0 to 100 %.

Academic Aspirations (x_6). Subjects were asked to respond to a question about their own educational and work plans. Seven responses were provided, ranging from 'Leave school as soon as possible to obtain a job' to 'Complete secondary school and enter University.'

Cognitive Expectations (x_7). Teachers were requested to provide a rating of each student's chances of completing Grade 13 successfully. This was a consensus rating assigned by all the teachers who taught each individual student. It employed a five-point scale which ranged from 'much below average' to 'much above average'.

Expectations for Co-operation (x_8). Within each school, teachers were requested to rate each student's co-operation with students and teachers. This represented a consensus rating assigned by the group of teachers on the basis of a five-point scale that ranged from 'much below average' to 'much above average'.

Expectations for Industry (x_9). This variable was also a consesus rating by the group of teachers of each student's industry in school work. It was rated on a five-point scale identical to x_8.

Expectations for Reliability (x_{10}). The teachers also rated, on a five-point scale identical to x_8, each student on his or her reliability as indicated by performance on curricular and extra-curricular activities.[4]

Standardized Achievement Tests (x_{12}, x_{13}). Two tests were used: the CATE, a standardized English language achievement test, and the CATM, a standardized achievement test in mathematics. The CATE had a range of scores from 0 to 100 and the CATM had a range of scores from 0 to 30.

Advantages of the Data

There has been considerable research on both the bases of teachers' expectations (Dusek & Joseph, 1983) and the effects of teachers' expectations upon the performances of their students (Braun, 1976; Brophy, 1983; Cooper, 1979; Dusek, 1975) much of it stimulated by the publication of Pygmalion in the Classroom (Rosenthal & Jacobson, 1968). In this respect, both researchers and teachers have been concerned that the performances of students may be lowered, rather than raised, because expectations for performances are low (Finn, 1972, p387) especially if students are disadvantaged or come from minority groups.

In the context of this research literature, the present data has six advantages. First, the data were collected prior to the publicity concerning teachers' expectations which followed the appearance of Pygmalion in the Classroom. Thus, there is littel likelihood that, in this research, the teachers restrained their expectations as they may have in research which followed the publication of this book (Brophy, 1983, p632; Clifton, Perry, Parsonson & Hyrniuk, 1986).[5] Second, there is an additional advantage in the data being gathered from the early 1960s because this was a time when ethnic stratification was more evident in Canadian society than at present (see Darroch, 1979). Third, the data includes a variable which can be used to measure ethnicity rather accurately.[6] Fourth, the data were obtained from the total population of students in Grade 9 in the Province of Ontario. Thus, generalizations may at least apply to the selected ethnic groups in this province at the time the data were gathered.[7] Fifth, data were collected over a number of years so that the variables were measured at different periods during the students' academic careers (see Figure 1). Very few

longitudinal research studies have been conducted in this area (Brophy, 1983, p655; Dusek & Joseph, 1983, p342). Thus, for this data it is reasonable to assume that teachers' expectations, measured in the Autumn of 1960, mediate between ethnicity, measured in the Autumn of 1959, and performances, measured in the Spring of 1961. Sixth, in many studies only the linkages between the characteristics of pupils and the expectations of teachers have been examined, and often only in contrived or laboratory situations (Braun, 1976; Cooper, 1979; Dusek, 1975; Dusek & Joseph, 1983). In the present study, these relationships are examined as they existed within actual school settings rather than in either contrived or laboratory settings.

Results

The relevant correlation coefficients, means, and standard deviations are presented in Table 1. Ethnicity has positive correlations with all other variables, and the largest correlations are with achievement in both English and mathematics. Analyses of variance examining the relationship between ethnicity and each of the other variables in the model reveal that the Yiddish students have higher mean scores (p. .0001) than the French students.

Table 1

Also, both the cognitive and normative expectations are very highly related to assigned grades, standardized achievement in English, and standardized achievement in mathematics. As expected, these performance measures have higher correlations with the cognitive expectation than with the normative expectations, and for the normative expectations they generally have higher correlations with industry than with co-operation and reliability. Moreover, both normative and cognitive expectations have higher correlations with teacher assigned grades than with the standardized achievement tests.

To identify the direct and indirect effects of the independent and intervening variables upon the dependent variables a path analysis was undertaken (see Duncan, 1975; Heise, 1975). The path coefficients and R^2s for both reduced-form and fully recursive models are reported in Table 2 and a path diagram of the fully recursive model is illustrated in Figure 2.

Table 2

Figure 2

Beginning with cognitive and normative expectations it is observed that the effects of ethnicity are small in both the reduced-form and fully recursive models. However, before assigned grades and academic aspirations in Grade 9 are incorporated, the effects of ethnicity are slightly larger. Specifically, the effects of ethnicity decreased by 40% for cognitive expectations and between 15% and 20% for the three normative expectations.

Nevertheless, past performance has the most powerful effects upon both cognitive and normative expectations of teachers while the second most powerful effect on cognitive expectations is from academic aspirations. This means that what originally may have been interpreted as moderately strong ethnic bias on the part of teachers is, to a large degree, the effect of previous achievement and aspirations. If students have done well and have high aspirations then, other things being equal, their teachers expect them to complete high school. Moreover, if students have done well then, other things being equal, their teachers also expect them to be responsible in following the generally accepted norms of the school.

It must be noted, however, that ethnic bias has not been completely eliminated by including assigned grades and academic aspirations into the analysis of teachers' expectations. There are still small but significant effects of ethnicity upon the cognitive and the normative expectations.

Moreover, it is not known to what extent academic achievement and aspirations in Grade 9 are, in themselves, biased as a result of ethnicity in previous years, and the indirect effects this may have had upon the teachers' expectations in Grade 10. In any event, the results presented here indicate that when sex, socioeconomic status, intellectual ability, assigned grades, and academic aspirations are controlled, there are differrences between the Yiddish and French students. Teachers have higher expectations for the Yiddish students than for the French students.

In examining assigned grades in Grade 10, it is observed that the effect of ethnicity is extremely small when the intervening variables, including the teachers' cognitive and normative expectations, have been taken into account. However, when the same intervening variables have been considered, the effects of ethnicity upon standardized achievement in both English and mathematics are relatively strong. Ethnicity has direct effects upon achievement in English of .194 and upon achievement in mathematics of .143 while it has a direct effect of .009 upon assigned grades. In both English and mathematics, the Yiddish students perform at substantially higher levels than the French students.

Conversely, teachers' expectations have stronger effects upon assigned grades than upon standardized achievement in English and mathematics. For assigned grades, the teachers' expectations result in an increase in R^2 from .464 to .601, while the increase for ahcievement in English is from .401 to .455 and the increase in achievement in mathematics is from .327 to .349. This is understandable because the grades have been assigned by the teachers while the achievement tests have been evaluated independently of the teachers (see Cooper, 1979). Moreover, for both the assigned grades and the standardized achievement tests, cognitive expectations have more powerful effects than normative expectations. However, for assigned grades, expectations for industry has an effect which is almost as large as the effect

for cognitive expectations. Furthermore, cognitive expectations have more substantial effects upon achievement in English than upon achievement in mathematics.

In order to provide a closer examination of the effects of ethnicity, the direct and indirect effects (Alwin & Hauser, 1975) of all the predetermined variables are presented in Table 3. In this table, it is noted that very little of the ethnic effects are mediated through teachers' expectations, and these effects are lower for both standardized achievement measures than for assigned grades. Moreover, it is also noted that very little of the effects of the other two ascribed characteristics, sex and socioeconomic status, are mediated through teachers' expectations. In fact, for these two variables past performance and aspirations mediate substantially more of the indirect effects than teachers' expectations.

Table 3

This table also illustrates that past performance has, by far, the strongest mediating effects through teachers' expectations upon all three achievement measures. Moreeover, these effects are much stronger for assigned grades than for standardized achievement in English and mathematics. Thus, the data offer little support to common arguments suggesting teachers' expectations have strong mediating effects between ascribed characteristics of students and their achievement. And, the evidence suggests that the indirect effects for ethnicity are slightly stronger upon grades which have been assigned by the teachers than upon standardized achievement tests.

Nevertheless, teachers' cognitive expectations and expectations for industry affect assigned grades, and teachers' cognitive expectations affect standardized achievement in English and mathematics. Similar findings have been previously reported (Brophy & Good, 1974; Cooper, 1979; Dusek, 1975), but the present study extends past research by showing that the mediating

effects are from past performance rather than from ethnicity, or for that matter, from sex, socioeconomic status, or intellectual ability. That is, the data support the argument that teachers base their expectations upon meritorious factors rather than ascribed factors. Furthermore, it is the meritorious factor of past performance as mediated through teachers' expectations, which affect, to the greatest degree, student achievement.

Discussion

It has been suggested that, in Canada, the educational institution may be, in part, perpetuating the vertical mosaic (Porter, 1965) because teachers assume that children from certain ethnic groups can learn more and faster than children from other ethnic groups. It is also argued that expectations of teachers play a role in translating the differences between students in potential into differences in actual achievement. Differrences in potential may result from the different socialization patterns that different ethnic groups provide for their children. That is, different socialization patterns may be the mechanism through which ethnicity is related to ability, aspirations, motivation, and values. As well, teachers may develop their expectations for students, at least in part, upon the relevant achieved characteristics of students. In turn, the educational institution may sort students on these criteria. These processes may lead, at later periods of time, to greater variation between ethnic groups in achievement in both the educational institution and the occupational world.

The evidence presented here suggests that teachers appear to base their expectations upon past performance to a much greater degree than upon ethnicity, sex, socioeconomic status, or intellectual ability. The evidence also suggests that teachers evaluate student achievement on the basis of both cognitive expectations and expectations for industry, whereas the performances on the standardized achievement tests are influenced mainly by cognitive

expectations. The fact that the evaluation of student achievement is based upon both cognitive and normative criteria suggests that, to some degree, ideas about meritocratic processes are not completely consistent with what happens in schools (see Dreeben, 1968). In a pure meritocratic system, teachers would evaluate the academic performance of students entirely upon their cognitive expectations which in turn, would be based upon their past performance and perhaps not even on their intellectual ability. Nevertheless, it must be remembered that the effects of ethnicity, as mediated through teachers' expectations, are relatively small, and it is within this context that meritocractic factors may not be operating in schools.

The present data are limited to high school students in Grades 9 and 10, and it is possible that teachers' expectations had much greater effects before the students reached high school. That is, the linkages between ethnicity, intellectual ability, past performances, cognitive and normative expectations, assigned grades, and standardized achievement observed here may have been the result of the expectations of teachers in previous years. Perhaps ethnicity, via teachers' expectations, have cumulative effects upon abilities, aspirations, and performances throughout the students' academic careers (see West & Anderson, 1976), and significant portions of the effects from abilities, aspirations, and performances, as measured in this research, are indirect effects that have previously resulted from ethnicity. In fact, Rist (1970) suggests that the indirect effects of ethnicity, through teachers' expectations, are much greater in the first few years of school.

From another perspective, the analyses illustrate that ethnicity is related to intellectual ability, academic aspirations, and standardized achievement in both English and mathematics. This suggests that ethnicity has important direct and indirect effects upon educational performances as measured by standardized achievement tests, but the indirect effects are not, to any great extent, the result of teachers' expectations. Rather, some of the effects are directed through other factors which may be, to some degree,

endemic within the subcultural backgrounds of the children. That is, children may be socialized within ethnic subcultures so that their abilities, aspirations, motivation, and values are shaped to fit into certain education and occupational status positions within society (Blishen, 1970, p120; Breton & Rosenborough, 1968, p4). The differences in achievement between the French- and Yiddish- speaking students in this study may reflect, to some degree, differences in subcultural backgrounds.

Notes

1 Another aspect of this perspective, of course, is that schools exhibit certain modes of cultural capital, including teachers' expectations, the curriculum, and more particularly the 'culture of positivism' (Giroux, 1981) used to legitimate both the curriculum and the action of teachers. It would be useful to empirically examine this broader perspective, but our data are inadequate for such analyses. Nevertheless, Livingstone (1983) has recently examined education in Ontario from this perspective.

2 When the students entered Grade 10, in the Autumn of 1960, the majority of their teachers already knew them from the previous year. In Ontario, high school teachers specialize in subject areas, and may teach students from Grade 9 to Grade 13. In this respect, over 85% of the students who did not drop out of school or move to another province or country remained in the same school for both the 1959-1960 and 1960-61 academic years. Also, teachers generally review the cumulative records of their students who have recently transferred to the school. Thus, it is usual for teachers to have considerable information about their students' previous performances.

3 The other students dropped out of school, or moved to another province or country, with the majority dropping out or moving during July and August. As noted previously, the retention rate for the French-speaking students was the lowest of all the ethnic groups while the retention rate for the Yiddish-speaking students was the highest (King, 1968).

4 For all expectation measures, it must be recognized that considerable between-teacher differences may be obliterated by averaging the responses. This probably increases the reliability of the expectations

and it probably attenuates the relationship between the expectations and the other variables in the model. As such, the estimates provided in this paper are probably conservative.

5 In fact, Brophy (1983, p646) notes that simply making teachers aware of the possible effects of their expectations upon students may induce them to change these expectations.

6 The Canadian census uses a similar measure to distinguish between descent groups. Moreover, recent large-scale research on related aspects of the education of Canadian students did not include any measures of ethnicity (see Breton, 1972), or included so few subjects that it is impossible to estimate the effects of ethnicity upon relevant dependent variables (see Porter, Porter & Blishen, 1973; Porter, Porter & Blishen, 1982).

7 Since the data were collected in the 1950s and 1960s, it is not known if the results are applicable at the present time. Perhaps the effects of teachers' expectations upon the performances of students will never be adequately known because of the publicity this type of research has received and the possible effects of such publicity on the information teachers may be willing to divulge to researchers.

8 One of the reviewers noted that during the early 1960s many of the French-speaking students would have had to transfer to English-speaking high schools. From this perspective, the reviewer argued that their lower performance is <u>not</u> endemic within their subcultural backgrounds, but <u>is</u> endemic within the culture of the English high schools.

We do not have evidence which would unequivocally confirm or deny the proposition that the French-speaking students transferred to English high schools, but the evidence we have presented does not seem to support

the reviewer's argument. First, when we reported the effects of ethnicity upon academic performances in Grade 10 we had already controlled for both intellectual ability (measured by a non-verbal test) and academic performances, both of which were measured in Grade 9. Second, the differrences between the French- and Yiddish-speaking students are evident, and almost equal, for performances in both English and mathematics. This is difficult to understand, given that the cultural content of the standardized English test is substantially greater than the cultural content of the standardized mathematics test. Third, it must also be remembered that some of the Yiddish-speaking students may have transferred from Yiddish- or Hebrew-speaking schools to English-speaking schools. Thus, it seems that the differences between the French- and Yiddish-speaking students must be more than simply cultural and language factors endemic within the English high schools. Finally, even if the socialization process operates as this reviewer argues, then it <u>may be</u> that the French schools simply reinforce the subcultural abilities, aspirations, motivation, and values which are endemic within the students' families. This is not unreasonable, and is completely consistent with our interpretation of the evidence.

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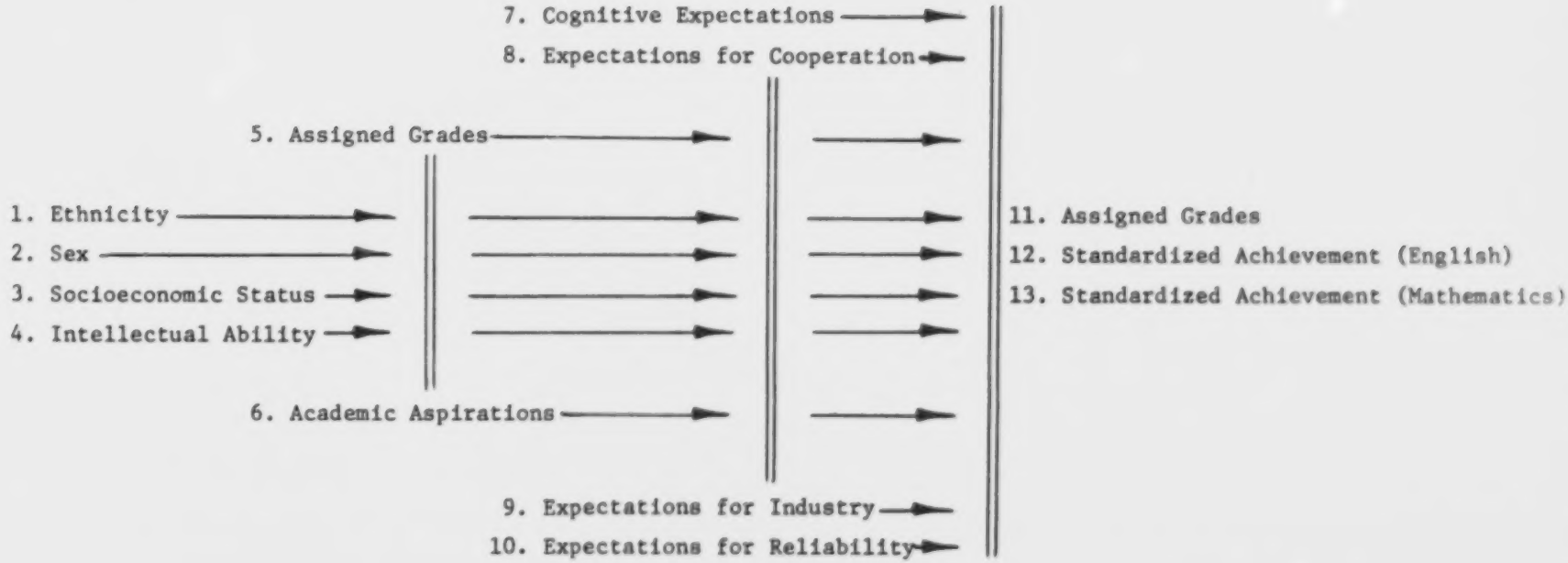

FIGURE 1

THE THEORETICAL MODEL

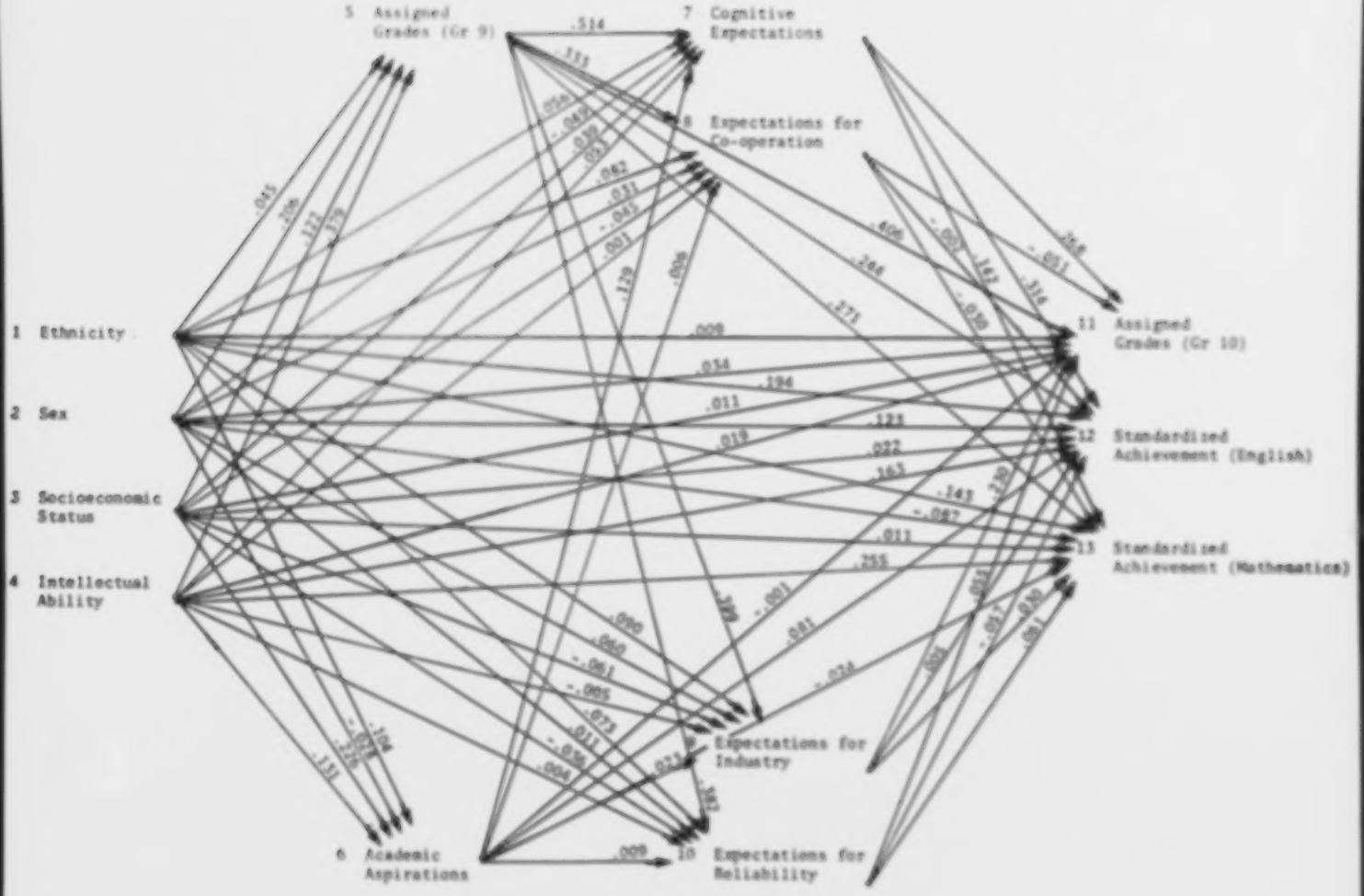

FIGURE 2

PATH DIAGRAM OF THE FULLY RECURSIVE MODEL

TABLE 1

CORRELATIONS, MEANS, AND STANDARD DEVIATIONS FOR ALL VARIABLES

		X 1	X 2	X 3	X 4	X 5	X 6	X 7	X 8	X 9	X 10	X 11	X 12	X 13
1.	Ethnicity	1.000												
2.	Sex	.006	1.000											
3.	Socioeconomic Status	.116	-.022	1.000										
4.	Intellectual Ability	.127	-.001	.155	1.000									
5.	Assigned Grades (Grade 9)	.108	.203	.181	.403	1.000								
6.	Academic Aspirations	.147	-.032	.259	.179	.278	1.000							
7.	Cognitive Expectations	.141	.051	.181	.296	.574	.301	1.000						
8.	Expectations for Cooperation	.114	.100	.026	.140	.342	.098	.464	1.000					
9.	Expectations for Industry	.129	.142	.025	.162	.414	.128	.583	.709	1.000				
10.	Expectations for Reliability	.112	.090	.044	.163	.390	.117	.555	.758	.740	1.000			
11.	Assigned Grades (Grade 10)	.125	.163	.143	.304	.677	.230	.653	.425	.569	.502	1.000		
12.	Standardized Achievement (Eng.)	.294	.182	.186	.388	.541	.296	.534	.253	.325	.284	.545	1.000	
13.	Standardized Achievement (Math.)	.229	-.017	.140	.432	.474	.174	.421	.238	.294	.293	.495	.518	1.000
	Means	1.04	1.50	6.29	26.90	59.26	4.81	2.45	3.29	3.15	3.19	62.68	56.21	16.15
	Standard Deviations	0.20	0.50	2.95	8.67	14.29	1.81	1.12	0.84	0.92	0.88	11.93	12.98	5.14

TABLE 2

PATH COEFFICIENTS AND R^2_s

Dependent Variables	Predetermined Variables										R^2
	X_1	X_2	X_3	X_4	X_5	X_6	X_7	X_8	X_9	X_{10}	
X_5	.045	.206	.122	.379							.221
X_6	.104	-.028	.226	.131							.098
X_7	.092	.054	.131	.264							.118
X_7	.056	-.049	.039	.053	.514	.129					.362
X_8	.097	.099	-.003	.128							.039
X_8	.082	.031	-.045	.001	.333	.006					.126
X_9	.110	.141	-.008	.149							.058
X_9	.090	.060	-.061	-.005	.399	.023					.186
X_{10}	.091	.090	.012	.150							.043
X_{10}	.073	.011	-.036	.004	.382	.009					.158

TABLE 2 (CONTINUED)

Dependent Variables	Predetermined Variables										R^2
	X_1	X_2	X_3	X_4	X_5	X_6	X_7	X_8	X_9	X_{10}	
X_{11}	.078	.165	.094	.280							.135
X_{11}	.045	.034	.008	.032	.640	.039					.464
X_{11}	.009	.034	.011	.019	.406	-.001	.268	-.051	.230	.055	.601
X_{12}	.237	.183	.110	.341							.256
X_{12}	.207	.108	.036	.180	.384	.121					.401
X_{12}	.194	.123	.022	.163	.244	.081	.314	-.002	.005	-.057	.455
X_{13}	.171	-.016	.058	.401							.221
X_{13}	.156	-.092	.014	.262	.369	-.005					.327
X_{13}	.143	-.087	.011	.255	.271	-.024	.142	-.030	.030	.061	.349

1 = Ethnicity, 2 = Sex, 3 = Socioeconomic Status, 4 = Intellectual Ability, 5 = Assigned Grades (Grade 9), 6 = Academic Aspirations, 7 = Cognitive Expectations, 8 = Expectations for Cooperation, 9 = Expectations for Industry, 10 = Expectations for Reliability, 11 = Assigned Grades (Grade 10), 12 = Standardized Achievement (English), 13 = Standardized Achievement (Mathematics).

TABLE 3

TOTAL, INDIRECT, AND DIRECT EFFECTS OF THE PREDETERMINED VARIABLES UPON ASSIGNED GRADES AND STANDARDIZED ACHIEVEMENT

Dependent Variables	Predetermined Variables	Total Effects	Indirect Effects via X_5 X_6	Indirect Effects via X_7 X_8 X_9 X_{10}	Direct Effects
X_{11}	X_1	.078	.033	.036	.009
	X_2	.165	.131	.000	.034
	X_3	.094	.086	-.003	.011
	X_4	.280	.248	.013	.019
	X_5	.640		.234	.406
	X_6	.039		.040	-.001
	X_7	.268			.268
	X_8	-.051			-.051
	X_9	.230			.230
	X_{10}	.055			.055
X_{12}	X_1	.237	.030	.013	.194
	X_2	.183	.075	-.015	.123
	X_3	.110	.074	.014	.022
	X_4	.341	.161	.017	.163
	X_5	.384		.140	.244
	X_6	.121		.040	.081
	X_7	.314			.314
	X_8	-.002			-.002
	X_9	.005			.005
	X_{10}	-.057			-.057
X_{13}	X_1	.171	.015	.013	.143
	X_2	-.016	.076	-.005	-.087
	X_3	.058	.044	.003	.011
	X_4	.401	.139	.007	.255
	X_5	.369		.098	.271
	X_6	-.005		.019	-.024
	X_7	.142			.142
	X_8	-.030			-.030
	X_9	.030			.030
	X_{10}	.061			.061